

## Amendments to the Claims

1. (currently amended) A radiation flux imaging system comprising:  
a non-imaging radiation detection means device;  
a position sensing means sensor, to detect the position and orientation of said radiation detection means;  
a contact sensor to detect contact of said radiation detection means with a surface to be imaged;  
a processor processing means to process position and orientation data from said position sensing means sensor, the presence or absence of contact from said contact sensing means sensor and local radiation flux from said radiation detection means to determine the surface geometry of a surface to be imaged and the corresponding field of radiation flux; and  
a display means, to display said geometry and radiation flux field to a user.
2. (cancelled)
3. (currently amended) A system according to claim 1, wherein said processor is configured processing means further includes means to identify positions corresponding to inadequate data collection, and means to communicate those positions to a user, in use.
4. (currently amended) A system according to claim 1, further comprising means a biasing device to bias said radiation detection means away from a surface to be imaged, and a processor processing means to calculate the depth of a radiation source below said surface to be imaged by comparison of the local radiation flux in the biased and unbiased positions.
5. (currently amended) A system according to claim 1, further comprising means a marking device to mark the surface to be imaged.

6. (cancelled)

7. (currently amended) A system according to claim 1, wherein the position sensing means sensor comprises a plurality of position sensing means sensors, fixed relative to each other, and the processor is configured processing means further comprises means to compare the measured relative positions of the said plurality of position sensing means sensors, thereby providing an identification of position measurement errors.

8. (currently amended) A system according to claim 1, wherein the processor processing means identifies any radioactive source with an activity above a pre-set level and displays the position (s) of those/or that radioactive source (s) on the display means.

9. (currently amended) A system as claimed in claim 8, wherein the pre-set level is determined by the processor processing means and is a proportion of the activity level from the radioactive source with the highest activity level.